LISTING OF THE CLAIMS:

A complete listing of the claims is provided below. This listing of the claims replaces all prior versions and listings of claims in the application.

Please cancel claims 1-20 without prejudice or disclaimer. Please add new claims 21-40 as follows:

1-20. (Cancelled)

21. (New) A method for semi-solid metal casting, comprising:

providing a first aluminum-silicon hypereutectic alloy and a second aluminum-silicon hypereutectic alloy;

heating the first alloy to a liquid state;

combining the first alloy and the second alloy to form a semi-solid metal;

increasing nucleation events of primary Silicon particles in the semi-solid metal by rapidly cooling the semi-solid metal by combining the first and second alloys at different temperatures and by decreasing the time the semi-solid metal remains in the semi-solid state before casting; and

casting the semi-solid metal in a cast machine.

22. (New) The method of claim 21, wherein the primary Silicon particles have an average diameter of between about 20 microns to about 50 microns.

23. (New) The method of claim 22, wherein the primary Silicon particles have an average diameter of less than about 40 microns.

24. (New) The method of claim 21, wherein the first and second aluminum-silicon hypereutectic alloys are of the same composition.

25. (New) The method of claim 21, further comprising:

providing a third aluminum-silicon hypereutectic alloy; and

combining the third alloy with the first and second alloys.

26. (New) The method of claim 21, wherein the second alloy is at room temperature before being combined with the first alloy.

27. (New) The method of claim 21 further comprising heating the second alloy to a liquid state.

28. (New) The method of claim 27, wherein the first alloy is heated to a higher temperature than the second alloy.

29. (New) The method of claim 21, wherein the first alloy is heated to a temperature of about 600°C to about 850°C.

30. (New) The method of claim 29, wherein the first alloy is heated to a temperature of about 630°C to about 800°C.

31. (New) The method of claim 21, wherein the first alloy is heated to a temperature of about 760°C.

32. (New) The method of claim 27, wherein the second alloy is heated to a temperature from about 22°C to about 640°C.

33. (New) The method of claim 21, wherein the first and second alloys are a 390 alloy.

34. (New) The method of claim 27, wherein the second alloy is heated to a temperature of about 600°C to about 850°C.

35. (New) The method of claim 34, wherein the second alloy is heated to a temperature of about 630°C to about 800°C.

36. (New) The method of claim 27, wherein the second alloy is heated to a temperature of about 760°C.

37. (New) A cast product made by a semi-solid metal casting method, comprising:

a cast product having increased nucleation of primary Silicon particles by combining a first and second aluminum-silicon hypereutectic alloys to form a semi-solid metal, wherein before combining the first and second alloys, the first alloy was heated to higher temperature than the second alloy temperature and the time the semi-solid metal stays in a semi-solid state before being cast is reduced.

38. (New) The cast product of claim 37, wherein the primary silicon particles have an average diameter of about 20 microns to about 50 microns.

39. (New) The cast product of claim 38, wherein the primary silicon particles have an average diameter of less than about 40 microns.

40. (New) The cast product of claim 37, wherein the first and second aluminum-silicon hypereutectic alloys are of the same composition.